MONTANA DEPARTMENT OF ENVIRONMENTAL QUALITY
OPERATING PERMIT TECHNICAL REVIEW DOCUMENT

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The following table summarizes the air quality programs testing, monitoring, and reporting requirements applicable to this facility.

Facility Compliance Requirements	Yes	No	Comments
Source Tests Required	X		PM_{10}, NO_X, VOCs, CO, and HAPs as required by MACT standards
Ambient Monitoring Required		X	
COMS Required		X	
CEMS Required		X	
Schedule of Compliance Required		X	
Annual Compliance Certification and Semiannual Reporting Required	X		
Monthly Reporting Required		X	
Quarterly Reporting Required		X	
Applicable Air Quality Programs			
ARM Subchapter 7 – Montana Air Quality Permit (MAQP)	X		MAQP #2667-13
New Source Performance Standards (NSPS)	X		
National Emission Standards for Hazardous Air Pollutants (NESHAPS)		X	
Maximum Achievable Control Technology (MACT)	X		
Major New Source Review (NSR) – includes Prevention of Significant Deterioration (PSD) and/or Non-attainment Area (NAA) NSR	X		
Risk Management Plan Required (RMP)	X		
Acid Rain Title IV		X	
Compliance Assurance Monitoring (CAM)	X		Appendix E
State Implementation Plan (SIP)	X		

TABLE OF CONTENTS

SECTION I. GENERAL INFORMATION 3

A. PURPOSE 3
B. FACILITY LOCATION 3
C. FACILITY BACKGROUND INFORMATION 3
D. CURRENT PERMIT ACTION 8
E. TAKING AND DAMAGING ANALYSIS 8
F. COMPLIANCE DESIGNATION 9

SECTION II. SUMMARY OF EMISSION UNITS 10

A. FACILITY PROCESS DESCRIPTION 10
B. EMISSION UNITS AND POLLUTION CONTROL DEVICE IDENTIFICATION 12
C. CATEGORICALLY INSIGNIFICANT SOURCES/ACTIVITIES 17

SECTION III. PERMIT CONDITIONS 18

A. EMISSION LIMITS AND STANDARDS 18
B. MONITORING REQUIREMENTS 18
C. TEST METHODS AND PROCEDURES 18
D. RECORDKEEPING REQUIREMENTS 18
E. REPORTING REQUIREMENTS 18
F. PUBLIC NOTICE 19
G. DRAFT PERMIT COMMENTS 21

SECTION IV. NON-APPLICABLE REQUIREMENT ANALYSIS 22

SECTION V. FUTURE PERMIT CONSIDERATIONS 24

A. MACT STANDARDS 24
B. NESHAP STANDARDS 24
C. NSPS STANDARDS 24
D. RISK MANAGEMENT PLAN 24
E. CAM APPLICABILITY 24
F. PSD AND TITLE V GREENHOUSE GAS TAILORING RULE 25

SECTION I. GENERAL INFORMATION

A. Purpose

This document establishes the basis for the decisions made regarding the applicable requirements, monitoring plan, and compliance status of emission units affected by the operating permit proposed for this facility. The document is intended for reference during review of the proposed permit by the Environmental Protection Agency (EPA) and the public. It is also intended to provide background information not included in the operating permit and to document issues that may become important during modifications or renewals of the permit. Conclusions in this document are based on information provided in the original application submitted by Plum Creek Manufacturing , LP (Plum Creek), on July 12, 1995, and additional submittals including October 17, 2003, July 31, 2003, September 22, 2004, December 27, 2004, February 17, 2010, January 27, 2011.

B. Facility Location

Plum Creek owns and operates the Columbia Falls facility. The facility produces lumber, plywood, and a medium density fiberboard (MDF) and is defined under Standard Industrial Classifications (SIC) 2421, 2436, 2493, which include sawmill and planing mill, softwood veneer and plywood, and reconstituted wood products.

The facility is located in Flathead County, Columbia Falls, Montana, Section 7 and the SW¼ of Section 8, Township 30 North, Range 20 West. The plant's UTM Coordinates are Zone 11, with an Easting of 707.7 km, and a Northing of 5361.7 km with a plant wide elevation of 3075 feet above sea level.

The community of Columbia Falls is located on the west bank of the Flathead River while the Plum Creek facility is located on the northwest side of Columbia Falls. The facility is adjacent to residential communities and a public school is within a few blocks of the plant.

C. Facility Background Information

The air quality classification for the area is "better than National Standards" or "Unclassifiable" for all pollutants (40 CFR 81.327) except Particulate Matter with an aerodynamic diameter of 10 microns and less (PM_{10}). The Columbia Falls area of Flathead County has been designated as a nonattainment area for PM_{10}. The Plum Creek facility is located in this nonattainment area and has been identified as a contributor to the nonattainment status of Flathead County. This designation means that Prevention of Significant Deterioration (PSD) and New Source Review (NSR) rules apply to this facility.

The nearest significant complex terrain is Teakettle Mountain which rises more than 2,000 feet above the valley floor. It is located five miles northeast of Columbia Falls. There are two nearby areas designated as mandatory Federal Class I airsheds, which include Glacier National Park and the Bob Marshall Wilderness. The closest Class I airshed is Glacier National Park, which is located approximately 8 miles east of the facility. The Bob Marshall Wilderness airshed is located within 25 miles of Columbia Falls.

Montana Air Quality Permit (MAQP) History

Prior to **MAQP Modification #2667-M**, only the plywood veneer dryer (#2667), the Wellons unit (#1501), the MDF fiber dryers (#2233), the new baghouses at the MDF plant (#2174), and the original MDF plant (#5640051073) were subject to separate air quality permits.

On October 24, 1991, MAQP #2667-M was issued to Plum Creek because the Department of Environmental Quality (Department) was required to develop a PM_{10} emission control program as part of the State Implementation Plan (SIP) to bring the Columbia Falls area into compliance with the PM_{10} standards and demonstrate maintenance of the standards. This permit set allowable limits for wood-waste transfer cyclones, fugitive dust, and baghouses as well as limits for the veneer dryers, the fiber dryers, and the boiler.

On January 24, 1992, **MAQP #2667-01** was issued as a modification to MAQP #2667-M. The permitting action combined the entire facility under one permit and included a reduction of fugitive dust emissions resulting from chemical stabilization of plant roads and log yard areas.

On September 1, 1992, **MAQP #2667-02** was issued to reconcile a discrepancy between the hourly emission limitations listed in the permit and the annual emission limitations listed in the permit analysis.

On January 5, 1994, **MAQP #2667-03** was issued to install the Combustion Engineering natural gas boiler. This boiler supplies the steam necessary for the lumber drying kilns to operate year round. Prior to this installation, the steam supplied to the lumber drying kilns was shut off during the winter months because of the increased demand for steam from the rest of the facility. The lumber that was intended to be dried in the kilns was stacked outside and allowed to air dry as much as possible. When capacity allowed, the lumber was placed in the kiln for a final polishing dry.

On July 11, 1994, **MAQP #2667-04** was issued to construct and operate an electrostatic precipitator (ESP) on the wood-fired Riley-Union Stoker boiler. The ESP replaced the wet scrubber that was formerly used to control emissions from the boiler. This installation alleviated a back pressure on the boiler which allowed the steam production to increase to 170,000 pounds per hour (lb/hr) with a maximum input capacity to 292.4 million british thermal units per hour (MMBtu/hr). The additional steam was sufficient to allow a plant production increase of 13%.

The permit also allowed the MDF plant to install an additional sander, an air density separator, and a blow hog. The emissions from the sander will be controlled by the MDF sander dust baghouse. The emissions from the air density separator and the blow hog will vent to a MDF materials handling baghouse. In addition, secondary refiners installed in the MDF line will improve fiber quality and two more platens to be added to the MDF press will increase the capacity of the press.

To offset the increase in particulate emissions from the construction of the new sources and the increase in production capabilities, Plum Creek reduced the enforceable emission rate from the veneer dryers. In 1991, Plum Creek installed an ESP on the veneer dryer stack at the Columbia Falls plywood plant. Although the ESP was required to control opacity, a decrease in particulate emissions was also achieved. The decrease in particulate emissions had not been reflected in a permit or the State Implementation Plan.

The construction of the new sources of emissions, coupled with the increase in production capabilities, resulted in a net decrease of total particulate (26.4 tons per year (tpy)) and net increases in PM_{10} (5.6 tpy), oxides of nitrogen (NO_X) (315 tpy), carbon monoxide (CO) (162 tpy), Volatile Organic Compound (VOC) (97.7 tpy), and a negligible increase in toxic air pollutants. The emissions increase of NO_X, CO, and VOC each exceeded significant levels and were, therefore, subject to PSD review.

On April 17, 1995, **MAQP #2667-05** was issued to install 4 GeoEnergy E-tube wet electrostatic precipitators on the stacks of the MDF fiber dryers. Each ESP was designed to accommodate a stack flow of 70,000 actual cubic feet per minute (acfm) (280,000 acfm total) and vent to a common stack.

Plum Creek proposed to replace the two Energex burners used to heat the face dryer with a larger Coen burner. The Coen burner has a heating capacity of 50 MMBtu/hr. The increase in available heat to the MDF Fiber Dryers, along with Plum Creek's installation of two additional platens for the MDF Press, will increase the capacity of the dryers from 37 to 57 tons/hour of bone dry fiber processed. The production increase results in a significant net emissions increase of VOC, NO_X, CO, and oxides of sulfur (SO_2) and is subject to a PSD review.

The baghouse allowable emissions for the facility were changed to the pound-per-hour equivalent of the 0.005 grains per dry standard cubic feet (gr/dscf) emission rate. The previous method for determining the allowable emissions assumed the baghouses were 90% more efficient than cyclones. Manufacturers typically guarantee an emission rate of 0.005 gr/dscf for baghouses.

In addition, Plum Creek reinstalled an existing cyclone in the MDF raw materials storage building. This 10,000 acfm board trim cyclone allows trim to be recycled into the MDF process. It vents inside the MDF building where the emissions are controlled by the existing MDF material handling baghouse. This baghouse, previously permitted by MAQP #2667-04, was re-configured from a single baghouse with an air flow of 70,000 dry standard cubic feet per minute (dscfm) to two 25,000 dscfm units, which vent to a common stack.

As a final modification, Plum Creek installed an ESP between the Wellons cell and the veneer dryers. The ESP removes particulate from the gas stream that is used to heat the veneer dryers which results in a higher product quality. Although the ESP is not a source of emissions or a stack associated with a source of emissions, the installation of the ESP constitutes a changed condition of operation so the permit was modified to reflect this change.

On May 5, 1995, **MAQP #2667-06** was issued to allow an extension of time to complete the NO_X and CO testing on the Riley-Union Stoker boiler. The permit modification required Plum Creek to demonstrate compliance with the NO_X and CO limits on the Riley-Union Stoker boiler by September 22, 1995.

On July 26, 1995, Plum Creek was issued **MAQP #2667-07** to increase the allowable CO emissions from the Riley-Union Stoker boiler from 100 lb/hr to 468 lb/hr. The previous limit was based on AFSEF emission factors, which has since been determined to be inappropriate for a 20-year-old boiler. Manufacturers' data and tests on similar boilers suggest that CO emissions from a boiler of this type may be as high as 1.6 pound per million British thermal units (lb/MMBtu). Assuming a heat input capacity of 292.4 MMBtu/hr, an hourly emission rate of 468 lb/hr is calculated thus the allowable CO emissions for the boiler are increased by 1,612 tpy although actual CO emissions do not change. Because the allowable CO emission increase exceeded significance levels, the permit was subject to PSD review. As required by the PSD review process, the appropriate Federal Land Managers (FLM) and the EPA were given the opportunity to comment on the proposal but no comments were received from either party.

On October 2, 1997, Plum Creek was issued **MAQP #2667-08** by the Department to correct particulate emission limits for the MDF Felter #1 & #2 Baghouses. The emission limits were correctly calculated in the permit analysis of MAQP #2667-07 as 1.93 lb/hr of particulate but the emission limit was mistyped as 0.39 lb/hr in the permit. In addition, this modification updated the rule citations, removed testing and notification requirements already met by Plum Creek, updated the existing equipment list, and updated the emission inventory by including the sawmill sawdust target box and the drying kilns. As part of updating the equipment list, P17 Plywood #1 Chip Bin Cyclone and P18 Plywood #2 Chip Bin Cyclones were replaced by P23 Plywood Chip Bin Cyclone and P24 Plywood Fines Target Box.

On December 23, 1999, Plum Creek was issued **MAQP #2667-09** for the addition of a second MDF production line (Line 2). Unlike Line 1 (batch press), the new production line utilizes a continuous press for the production of MDF. Adding Line 2 to the MDF facility increased the production of MDF and profit from the facility. New limits were added to the permit and new emitting units were added to the emission inventory.

The addition of Line 2 triggered the PSD rules for CO, NO_X, and Ozone (measured as VOC). Because Plum Creek agreed to various limits, the contemporaneous emission changes of particulate matter and PM_{10} were below PSD significance levels. For this reason, no additional air quality analysis was required for particulate matter and PM_{10}.

On July 4, 2001, Plum Creek was issued **MAQP #2667-10** for an alteration in the design of the Line 2 MDF dryer emissions control equipment. The ESP was replaced by two Venturi scrubbers operating in series with a bio-filter system.

The addition of Line 2 triggered the PSD rules for CO, NO_X, and Ozone (measured as VOCs). Plum Creek was not subject to New Source Review Nonattainment Area permitting requirements.

Because the Best Available Control Technology (BACT) determination had changed since the initial issuance of MAQP#2667-09 for the second MDF line, the FLMs and EPA were given an opportunity to review the application submitted by Plum Creek. The change in the BACT caused the emission dispersion characteristics of the stacks to change, although the emission limits for the Line 2 MDF dryers will remain the same.

In addition to changing the emission controls for the second line, Plum Creek has made minor changes to several cyclones and baghouses on the existing and proposed MDF lines. The sizes and locations of some of the Line 2 baghouses have changed in the new design. Two cyclones have been removed from the Line 1 MDF process, and some of the baghouse names have been changed.

The emission inventory reflects the change in flow rates based on the volume of cooling air introduced into the bio-filter system. Due to the dryer stack dispersion characteristics and the baghouses, Plum Creek has submitted a revised PM_{10} compliance demonstration with this application. The modeling shows that the second line MDF project will not cause or contribute to a violation of the Montana Ambient Air Quality Standards (MAAQS).

On January 16, 2003, Plum Creek was issued **MAQP #2667-11**. Plum Creek submitted a NSR/PSD application for three historical projects at the Columbia Falls facility. During an independent compliance awareness review performed in 2000, Plum Creek discovered that the 1989 MDF Coen Burner Project, the 1990 MDF Line Speed Up Project, and the 1992 MDF Heating and Humidification Project should have gone through PSD permitting prior to the projects being constructed and/or implemented. Based on the PSD Significant Emission Rates, the 1989 MDF Coen Burner Project would have been subject to PSD permitting for CO and NO_X; the 1990 MDF Line Speed Up Project, for PM, PM_{10}, and VOCs; and the 1992 MDF Heating and Humidification Project, for PM, PM_{10}, and VOCs. As the Columbia Falls area (including the Plum Creek facility) was designated as a nonattainment area for PM_{10} by the EPA on November 15, 1990, the 1992 project would have triggered nonattainment area NSR permitting for PM_{10}. This permitting action addressed the PSD permitting, including the construction/implementation of the above-mentioned projects.

In addition, on November 19, 2002, the Department received a request from Plum Creek to remove the requirement limiting the MDF Line 2 equipment to 8,760 hours per year. As there are only 8,760 hours in a year, this requirement was not necessary and was removed.

On August 8, 2007, Plum Creek was issued **MAQP #2667-13**. Plum Creek submitted to the Department notification of proposed changes to the permitted Plum Creek facility under the provisions contained in the Administrative Rules of Montana (ARM) 17.8.745 (de minimis rule) and a request for an administrative amendment under the provisions contained in ARM 17.8.764. Specifically, Plum Creek proposed the following changes:

- Increase in air-flow from the Line 2 press vents to the existing Line 2 venturi scrubbers and biofilter.

- Installation and operation of a knock-out box particulate matter control and a new Line 1 biofilter emission control system for the Line 1 press vents and Line 1 MDF fiber dryers. The Line 1 MDF fiber dryers were previously controlled by four wet ESPs and the Line 1 press vents were uncontrolled.

The proposed Line 1 changes did not result in any increase in permitted allowable emissions; rather, the knock-out box resulted in a decrease in PM and PM_{10} emissions from Line 1 operations. The previously uncontrolled Line 1 press vents and the four wet ESPs controlling emissions from the Line 1 MDF fiber dryers was routed through the proposed Line 1 biofilter. Further, in an effort to prevent excess particulate matter from disrupting the Line 1 biofilter media, Plum Creek proposed the installation of a knock-out box to control particulate emissions from the Line 1 press vents prior to the proposed biofilter inlet. The increased air-flow through the Line 2 press vents resulted in an increase in PM and PM_{10} emissions from the Line 2 operations. However, because the proposed increase in emissions was below 15 tons per year, the project qualified as a de minimis change under ARM 17.8.745(1). The proposed project did not result in any increase of any other regulated pollutant from Plum Creek operations.

The primary purpose for the proposed project was to reduce hazardous air pollutant emissions from Line 1 and Line 2 operations and thereby enable Plum Creek to comply with Maximum Achievable Control Technology requirements for the wood products industry. Further, the Plum Creek facility was a major source of emissions as defined under the New Source Review permitting program; however, because the proposed project did not result in any emissions increase greater than the applicable pollutant specific NSR "significant emissions thresholds," as defined in ARM 17.8.801, the proposed project did not constitute a major modification as defined in ARM 17.8.801. Finally, because the Plum Creek facility was located in a PM_{10} nonattainment area, Plum Creek submitted modeling to demonstrate that the proposed increase in PM_{10} emissions from the Line 2 operations would comply with the applicable National Ambient Air Quality Standards (NAAQS) and MAAQS. An ambient air quality impact analysis showing project compliance with the applicable NAAQS/MAAQS is contained in Section VI of the permit analysis of MAQP #2667-13.

Title V Permit History

On January 13, 1999, Title V **Operating Permit #OP2667-00** was issued to Plum Creek as final and effective.

On September 11, 2003, Plum Creek was issued final and effective Title V **Operating Permit #OP2667-01**, which was a significant modification of the existing permit to incorporate the activities permitted under MAQP #2667-09, #2667-10 and #2667-11. MAQP #2667-09 included the addition of a second MDF production line (Line 2). The new production line utilized a continuous press for the production of MDF. New limits were added to the permit and new emitting units were added to the emission inventory.

MAQP #2667-10 included an alteration in the design of the Line 2 MDF dryer emissions control equipment. The ESP was replaced by two Venturi scrubbers operating in series with a bio-filter system.

MAQP #2667-11 included an emission limit change to the Riley-Union Stoker Boiler for PM_{10}. In addition, the requirement limiting the MDF Line 2 equipment to 8,760 hours per year was removed. Operating Permit #OP2667-01 replaced Operating Permit #OP2667-00.

As required under ARM 17.8.1205(d), on September 9, 2003, Plum Creek submitted to the Department an application for Title V **Operating Permit renewal #OP2667-02**. The application was deemed technically complete on December 27, 2004, with the submittal of a complete Compliance Assurance Monitoring (CAM) plan for applicable units in operation at the facility.

Since issuance of Permit #OP2667-01, there was only one significant modification to permitted operations at the Plum Creek facility, specifically, the addition of the 96.4 MMBtu/hr heat input capacity Babcock and Wilcox natural gas/diesel-fired boiler. The current permit action adds the new boiler to permitted operations. As applicable, the Babcock and Wilcox natural gas/diesel-fired boiler is subject to the NSPS requirements contained in 40 CFR 60, Subpart Dc, Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units; and the MACT requirements contained in 40 CFR 63, Subpart DDDDD, Industrial, Commercial, and Institutional Boilers and Process Heaters.

In addition, the current permit action updates Section I, General Information, to reflect a change in the facility Responsible Official (RO). Further, in accordance with the requirements contained in ARM 17.8, Subchapter 15, the Operating Permit renewal incorporates a CAM plan (Appendix E to Operating Permit #OP2667-02) for PM_{10} emissions from the existing wood-waste boiler controlled by a dry electrostatic precipitator (DESP) system; the Line 1 Fiber Dryer controlled by a wet electrostatic precipitator (WESP); and the Line 2 Fiber Dryer controlled by 2 wet venturi scrubbers. Also, during the Operating Permit renewal application process, Plum Creek requested a relaxation of recordkeeping log entry requirements for various emitting units covered under the Operating Permit. After review of the request, the Department maintains that the existing recordkeeping log entry requirements are necessary and consistent with other similar source permitting for certain recordkeeping requirements, such as verification of semiannual inspections. At this time, the Department will not modify this type of recordkeeping requirement, as requested. However, for certain other existing recordkeeping requirements, such as documentation of the hours of operation of control equipment, the Department agrees with Plum Creek and has relaxed this type of recordkeeping requirement, where appropriate. Finally, the current permit action updates various sections of the Operating Permit with current Title V Operating Permit language and established requirements. Operating Permit #OP2667-02 replaced Operating Permit #OP2667-01.

D. Current Permit Action

On February 17, 2010, the Department received a Title V renewal application from Plum Creek. Updates included removal of two natural gas boilers (previously identified as B02 and B04), changes made to comply with 40 CFR 63 Subpart DDDD, and removal of the Wood Grain Printer line (previously identified as H04 and H05). **Operating Permit #OP2667-03** replaces Operating Permit #OP2667-02.

E. Taking and Damaging Analysis

HB 311, the Montana Private Property Assessment Act, requires analysis of every proposed state agency administrative rule, policy, permit condition or permit denial, pertaining to an environmental matter, to determine whether the state action constitutes a taking or damaging of private real property that requires compensation under the Montana or U.S. Constitution. As part of issuing an operating

permit, the Department is required to complete a Taking and Damaging Checklist. As required by 2-10-101 through 2-10-105, MCA, the Department conducted the following private property taking and damaging assessment.

YES	NO	
XX		1. Does the action pertain to land or water management or environmental regulation affecting private real property or water rights?
	XX	2. Does the action result in either a permanent or indefinite physical occupation of private property?
	XX	3. Does the action deny a fundamental attribute of ownership? (ex.: right to exclude others, disposal of property)
	XX	4. Does the action deprive the owner of all economically viable uses of the property?
	XX	5. Does the action require a property owner to dedicate a portion of property or to grant an easement? [If no, go to (6)].
		5a. Is there a reasonable, specific connection between the government requirement and legitimate state interests?
		5b. Is the government requirement roughly proportional to the impact of the proposed use of the property?
	XX	6. Does the action have a severe impact on the value of the property? (consider economic impact, investment-backed expectations, character of government action)
	XX	7. Does the action damage the property by causing some physical disturbance with respect to the property in excess of that sustained by the public generally?
	XX	7a. Is the impact of government action direct, peculiar, and significant?
	XX	7b. Has government action resulted in the property becoming practically inaccessible, waterlogged or flooded?
	XX	7c. Has government action lowered property values by more than 30% and necessitated the physical taking of adjacent property or property across a public way from the property in question?
	XX	Takings or damaging implications? (Taking or damaging implications exist if YES is checked in response to question 1 and also to any one or more of the following questions: 2, 3, 4, 6, 7a, 7b, 7c; or if NO is checked in response to questions 5a or 5b; the shaded areas)

Based on this analysis, the Department determined there are no taking or damaging implications associated with this permit action.

F. Compliance Designation

The Department reviewed the Full Compliance Evaluation covering the period from May 16, 2006 to December 19, 2007. Based on the Department's review of the available information, the facility appeared to be in compliance with all observable conditions of MAQP #2667-13 and Permit #OP2667-02.

The Department also reviewed the Full Compliance Evaluation covering the period from December 19, 2007 to February 19, 2010. The evaluation found the facility in compliance with all observable conditions.

SECTION II. SUMMARY OF EMISSION UNITS

A. Facility Process Description

This facility consists of three plants all located at the same site: the sawmill, the plywood mill, and the MDF plant. The sawmill and plywood mills receive raw logs by truck. The logs are stored and sorted before being transferred to the mill for sawing into dimension lumber or to the plywood plant for peeling into veneer. Waste wood such as chips, sawdust, and planer shavings are transferred to the MDF plant for processing into fiberboard. Wood shavings and sawdust are also received from outside facilities as raw material for the fiberboard plant.

Sawmill and Planer

The primary operation at the facility is the production of stud grade lumber from raw logs. The process of cutting the logs into lumber includes debarking, sawing, chipping, kiln drying, planing, and packaging for shipping. The process begins by bringing raw logs from the log storage area and feeding them into the debarker. The debarker removes the bark from the log, which produces hogfuel. The peeled logs are cut to length by block saws located outside the sawmill building. The blocked logs enter the sawmill where they are cut to a dimension. The green lumber is sorted, bundled, and stacked for drying in the steam heated dry kilns. The Riley-Union Stoker boiler is used to provide steam to the drying kilns to dry rough green lumber. After the lumber is dried, it is taken to a planer. As the final step in manufacturing dimensional lumber, planers smooth the lumber surfaces and saws cut and size the lumber to final dimensions. The lumber is stacked and wrapped for shipping in the planer building before it is taken to market by either truck or rail.

During the processing of raw logs to dimensional lumber, there are four main types of by-products or residuals produced. The by-products of lumber manufacturing are sawdust, wood chips, planer shavings, and hog fuel. Three of the by-products are in a green or wet condition while the fourth by-product is relatively dry (wood shavings). The shavings are planed from the lumber after it has been dried in the dry kilns. These byproducts may be burned in the wood waste boilers, stored in bins, or used in the MDF process. The hog fuel is used as the fuel in the boiler to provide steam to the dry kilns. Bark from the log debarking process is the main fuel for the Riley-Union Stoker boiler. The boiler emits PM, SO_2, NO_X, CO, VOCs, Pb and a number of HAPs associated with wood combustion.

Plywood Plant

The manufacture of plywood consists of seven main processes: log debarking and bucking, heating the logs, peeling the logs into veneers, drying the veneers, gluing the veneers together, pressing the veneers in a hot press, and finishing processes such as sanding and trimming.

After debarking, the logs are cut to appropriate lengths in a step known as bucking. The logs (now referred to as blocks) are heated in hot water vats to improve the cutting action of the veneer lathe. The veneer lathe cuts the blocks into veneers. Lathed veneers are placed in a green veneer inventory, which are dried at either the Columbia Falls facility or the Plum Creek Evergreen, MT facility. The veneer dryers are heated with a wood-fired Wellons Fuel Cell. Gases escaping from the veneer dryer at the feed point are vented outdoors through roof vents directly above the dryer feed location, otherwise, the veneer dryer exhausts to a wet ESP. Plum Creek also purchases dry veneers and adds them to the dry veneer inventory made by the facility.

Plywood panels are made from dry veneers layered with glue and veneer cores. They are glued together with a thermosetting resin, phenol-formaldehyde, which is used for softwood and exterior grades of hardwood. The resin is applied through an automated process. Once the panels have been laid-up, the panels are pressed in a prepress to hold the panel composition together. The panels then

enter the plywood press where both steam heat and pressure are applied to form plywood. Hot pressing has two main objectives: (1) to press the glue into a thin layer over each sheet of veneer; and (2) to activate the thermosetting resin. The unfinished plywood is then taken to a finishing process where panels are cut, sanded, and patched to form finished plywood. The finished plywood is sorted, packaged for shipping and taken to market by rail and truck.

MDF Plant

The general steps used to produce MDF include mechanical pulping of wood chips to fibers (refining), drying, blending fibers with a resin and sometimes wax, forming the resinated material into a mat, and hot pressing.

Shavings, chips, and sawdust are brought to the MDF material handling building from other locations. A mixture of shavings, chips, and sawdust is screened by the scalper screen before entry into the air density separators. This allows for a cleaner raw material input into the MDF plant. The mixture of materials is stored in four storage silos. From the storage silos, the wood mixture is fed into the presteaming bin where the material is softened by steam before being sent to the digestors. The material is transferred from the digestors to the refiners. The refiners use revolving disks to mechanically pulp the chips to obtain fibers in a suitable form for making the board. The fibers are blended with a resin that discharges the resinated fibers to the dryer. At this point, the fibers move to the face or core fiber processing line. The two flash-tube dryers are used to reduce the moisture content of the fibers to desired levels. The dryers expel the dried wood fiber for use in the forming line. In emergency situations such as a fire in the dryers, the fibers in the dryer are aborted to the MDF Fire Dump Cyclone.

At the forming line, a layer of face fiber is laid down on the automated forming line, followed by two layers of core fiber, which is topped with a final layer of face fiber. This is a continuous process for forming the board, i.e., the fibers are deposited on a continuously moving screen system.

The continuously formed mat (four layers of fiber) must be prepressed using two-precompressors before the fiber board is cut into sheets and pressed into medium density fiberboard in the hot press. The press applies heat and pressure to activate the resin and bond the fibers into a solid panel. Pressing with steam heat and pressure occurs in the platen process. The press roof vents exhaust most of the press emissions into the atmosphere. The MDF boards are then cooled, sanded, and trimmed to final dimensions. MDF to be used indoors is treated with ammonia to remove residual formaldehyde. Part of the MDF product is painted with a wood grain finish. Finally, the finished product is packaged for shipment.

Unlike Line 1 (batch press), the new production line, the Line 2 MDF utilizes a continuous press for the production of MDF.

Facility Boilers

All three plants share B01 Riley-Union Stoker boiler as a source of process steam for their operations. The boiler uses wood waste supplemented with natural gas as a fuel. B02 20,000 pph steam boiler is a smaller natural gas boiler located at the plywood facility. This boiler is used when B01 Riley-Union Stoker boiler is not operating or additional steam is required. B04 Combustion Engineering boiler is a smaller natural gas boiler located near B01 Riley-Union Stoker Boiler which is used to add supplemental steam heat plant wide when B01 Riley-Union Stoker boiler is unable to serve the necessary steam load for the facility. Finally, the 96.4 MMBtu/hr Babcock & Wilcox natural gas/diesel fired boiler has been installed and replaced B02 and B04 operations.

B. Emission Units and Pollution Control Device Identification

The emission units, devices, activities, and pollution control devices at the facility are identified below along with a discussion of the periodic monitoring and applicable requirements for each specific emissions source.

B01 Riley - Union Stoker Boiler

The Riley-Union Stoker boiler was manufactured in 1973. It supplies steam heat to the entire facility. The steam is used in the dry kilns, plywood press, log vats, MDF platen presses and for MDF heating. The fuels used are wood waste and natural gas although less than 10% of natural gas is burned as supplemental fuel. The boiler is rated at 292 MMBtu/hr and 170,000 pph steam. The control equipment includes both multiclones (primary) and a dry ESP (secondary). The ESP was manufactured in 1993 by PPC Industries. It has an estimated control efficiency of 99% and includes four fields.

All applicable requirements have been identified in the permit. The periodic monitoring for the boiler requires operating, inspecting, and maintaining the control equipment in accordance with the manufacturer's recommendations. Requirements for emission standards in the permit include periodic source tests for PM_{10}, NO_X, and CO, visual surveys and/or semiannual opacity determinations, and recordkeeping.

96.4 MMBtu/hr Babcock and Wilcox Natural Gas / Diesel Boiler (75,000 lb Steam/hr)

The Babcock & Wilcox boiler is natural gas and diesel fired, used to supply steam, and does not incorporate control equipment. The boiler was manufactured in 1993 and is capable of producing 75,000 lb/hr of steam. Boiler diesel combustion is limited, by permit, to a maximum of 165,000 gallons during any rolling 12-month time period.

The sulfur in fuel limit is satisfied by burning pipeline quality natural gas and diesel fuel with a sulfur content less than the specified concentration. Natural gas purchased from utility companies is substantially free of sulfur and does not exceed the sulfur in fuel requirement. Monitoring compliance with the opacity and PM_{10} limits may be satisfied by burning only natural gas in the boilers or by conducting weekly visual surveys or Method 9 source testing when diesel fuel is combusted for boiler operations. In addition, when diesel fuel is combusted, the Department may require a Method 5 source test for PM_{10} emissions.

Further, requirements for emission standards in the permit include an initial source test and the associated recordkeeping and reporting requirements for NO_X, and CO. After the initial source test monitoring compliance with the applicable emission limits, additional source testing for NO_x and CO shall be conducted, as required by the Department.

M01 MDF Raw Material Handling Fugitives

These fugitive emissions result from handling shavings, sawdust, and chips. Shavings are stored inside the MDF Materials building and sawdust is stored outside of the building. Emissions result from unloading, stacking to piles, and removing from the piles. All wood waste material used to make MDF fiber is processed at this building.

Opacity and process weight are the only applicable requirements for the MDF Raw Materials. The compliance monitoring for these fugitive emissions includes performing weekly visual surveys and/or performing a Method 9 test or taking appropriate corrective actions to contain or minimize emissions. The Department may request a Method 9 at any time to monitor compliance with the opacity rule. In addition, the Department may request a Method 5 at any time to monitor compliance with the process weight rule.

MDF Material Handling Cyclones and Baghouses

The following emission units are all considered material handling cyclones and baghouses. Currently, the preconstruction permit contains emission limits for both total particulate and PM-10 for the majority of these cyclones and baghouses.

Description
M02 MDF N. Sander Baghouse #7
M03 MDF S. Sander Baghouse #8
M04 MDF Board Trim Fuel Baghouse #10
M05 MDF Sanderdust Fuel Baghouse
M06 MDF Hog Fuel Boiler Sanderdust Baghouse #11
M07 MDF In-Line Baghouse #5
M08 MDF CPS & In-Line Baghouse #6
M09 MDF Metering Bin Baghouse #1
M10 MDF Felter Baghouse #1
M11 MDF Felter Baghouse #2
M12 MDF Reject Fiber Cyclone & Baghouse
M13 MDF Materials Handling Baghouses (2)
M20 Line 2 MDF North Sander Baghouse
M21 Line 2 MDF South Sander Baghouse
M22 Line 2 MDF Reject Baghouse
M23 Line 2 MDF Forming Baghouse
M24 Line 2 MDF Coen Fuel Bin Baghouse

Line 1 and Line 2 MDF Material Handling Baghouses

These baghouses all have established particulate emission limits and hours of operation limit from the preconstruction permit. The compliance monitoring method for opacity requires performing visual surveys and/or semiannual Method 9 tests. The monitoring methods for the particulate emission limits include inspection and maintenance of the baghouses, which should ensure compliance. The Department may request source tests at anytime to monitor compliance with the emission limits.

M13a and M13b MDF Material Handling Baghouses

M13 MDF Materials Handling Baghouses (2) each have a testing requirement previously included in the preconstruction permit. M13 MDF Sander Baghouse was included in the original permit application and preconstruction permit. The permit required (via General Conditions) that construction was to commence by April 17, 1998. On May 22, 1996, the Department received a letter from Mitchell Leu requesting an extension to construct the MDF Sander Baghouse, Blow Hog and additional platens because construction had not commenced at the issuance of this permit. The Department responded with a letter on May 30, 1996, which stated that Plum Creek should request an extension through a permit modification and if BACT had not changed then the permit would be reissued. The Department has since received notification from Plum Creek to remove the MDF Sander Baghouse from the preconstruction permit and the operating permit.

These baghouses have established particulate emission limits and hours of operation limit from the preconstruction permit. The monitoring methods for opacity include performing visual surveys and/or semiannual Method 9 tests. The compliance monitoring methods for the particulate emission limits include testing on an every 3-year schedule.

The two baghouses are combined to one emissions stack. Because of the lack of availability of an appropriately sized baghouse, two, instead of one, baghouses were required to properly control the emissions.

Miscellaneous Line 1 MDF Material Handling Baghouses and Cyclones

These sources do not have any established particulate emission limits other than the process weight rule. The M12 MDF Reject Fiber Cyclone & Baghouse vents inside the MDF Building and M14 MDF Fire Dump Cyclone is an insignificant emissions unit that is only used in emergency situations. Monitoring compliance with the opacity limit shall be accomplished by performing visual surveys and/or a semiannual Method 9 compliance source test. Monitoring will include inspection and maintenance of the equipment.

M15 Line 1 MDF Face & Core Dryers

There are two MDF fiber dryers. The Core dryer consists of a sanderdust Coen burner with a heating capacity of 50 MMBtu/hr. One of the dryers is a face dryer heated by one Coen burner with a capacity of 50 MMBtu/hr.

The MDF fiber dryers are controlled with 4 GeoEnergy E-tube wet electrostatic precipitators (ESP). Each ESP is designed to accommodate a stack flow of 70,000 acfm (280,000 acfm total). The dryers are capable of processing 57 tons/hr of bone dry fiber.

The testing requirements for PM_{10} and VOCs include the requirements previously included in the preconstruction permit. Visual surveys and/or semiannual Method 9 observations have been added to monitor compliance with opacity and monitoring includes performing maintenance and inspections on the ESP(s) in accordance with the manufacturer's recommendations.

M16 Line 1 MDF Forming & Finishing

Emissions from the 6 press vent fans and the 10 board cooler fan vents are vented through the roof using induced draft fans. The fans control the fugitive formaldehyde and VOCs.

Visual surveys and/or semiannual Method 9 source testing has been required to monitor compliance with opacity. If opacity is exceeded, a Method 5 test may be required by the Department to demonstrate compliance with the PM_{10} emission limit. The VOC emission limit was based on an emission factor developed through testing at potential production; it is unlikely that the limit will be exceeded. Scheduled testing to demonstrate compliance with the VOC limit has not been required at this time but may be required at the Department's request.

Outdoor Plywood Plant Process and Material Handling Fugitive Emissions

The fugitive emissions from the P02 Bucking Saws; P04 #1 Chip Truck Bin Loadout; P05 #2 Chip Truck Bin Loadout; P06 #1 Truck Bin Loadout, Sawdust; P07 #2 Truck Bin Loadout, Sawdust; P08 #3 Truck Bin Loadout, Hog Fuel; and P24 Plywood Fines Bin Target Box have been grouped under Outdoor Plywood Plant Process and Material Handling Fugitive Emissions.

The bucking saw process equipment PM_{10} emissions are estimated at 29 tpy. The materials from this process are temporarily stored in bins or silos until they are loaded into to trucks for transport to another location or off site. Particulate emissions result from the loading and unloading of chips, sawdust, and hogfuel from the bins.

The applicable requirements associated with this group of emission units include opacity and process weight. Visual surveys and/or semiannual Method 9 tests have been required to monitor compliance with opacity. The Department may request a Method 5 test at any time to monitor compliance with the process weight rule.

P16 Plywood Presses

Veneer sheets that have been layered with adhesive are placed in the presses to create plywood panels using steam heat and pressure. The presses emit VOC and formaldehyde emissions from the wood and glue. Overhead roof vents exhaust the majority of the emissions from the presses. The VOC emissions have been estimated at 26 tpy of which 0.02 tpy are estimated as formaldehyde.

The only applicable requirement for this source is opacity. Visual surveys and/or a semiannual Method 9 source test has been required as a method to monitor compliance.

Plywood Material Handling Baghouses and Cyclones

The following emission units are all considered material handling cyclones and baghouses. The preconstruction permit contained emission limits for both total particulate and PM_{10} for the following cyclones and baghouses.

Description
P19 Plywood Sander Baghouse
P20 Plywood 18" Trim Baghouse
P21 Plywood 30" Trim Baghouse
P23 Plywood Chip Bin Cyclone

Periodic monitoring for compliance with opacity for these sources includes visual surveys and/or a semiannual Method 9 source test. The visual survey frequencies for baghouses are weekly whereas cyclones are monthly. The particulate emissions from these baghouses and cyclones are all less than 6 tpy per emissions unit. Therefore, no particulate testing has been required to monitor compliance with the emissions limit at this time. However, the Department may require testing if it is determined to be necessary.

P22 Veneer Dryers & P14 Veneer Dryers, roof vents at feed point

Two plywood veneer dryers with a combined design capacity of 20,000 square feet/hr of plywood on a 3/8" basis are used to heat the veneer sheets and drive off moisture. The dryers are heated with a Wellons wood waste burner, which has a design capacity of 30 MMBtu/hr. The dryer off gas and the burner combustion gases are routed through a Geo-Energy wet ESP and exhausted through a common stack. Fugitive emissions (particulates and VOC gases) are vented outdoors through roof vents directly above the dryer feed location.
Permit emission limits had been established for the veneer dryers by the preconstruction permit. The combined particulate and VOC fugitive emissions are less than 5 tpy. They have been grouped with the veneer dryers because ARM 17.8.1201(22)(b) states those fugitive sources associated with an emissions unit are to be quantified with that emissions unit and are not considered to be insignificant emissions unit.

Testing has been required to monitor compliance with the PM_{10} emission limits and visual surveys and/or a semiannual Method 9 source tests have been required to monitor compliance with opacity. Periodic monitoring for the veneer dryers includes operation, inspection, and maintenance of the ESP and recordkeeping of types of fuel burned.

Outside Sawmill Process and Material Handling Fugitive Emissions

S02 Chop Saws, S05 Sawdust Truck Bin Loadout, and S08 Planer Shavings Truck Bin were grouped together as outside sawmill process and material handling fugitive emissions because all of these emission sources have the same applicable requirements.

Particulate emissions from the process equipment are a result of sawing, debarking and grinding of logs and bark. The materials are temporarily stored in bins until they are loaded in to trucks for transport to another location or off site. Particulate emissions result from the loading and unloading of chips, sawdust, and hogfuel.

The applicable requirements associated with this group of emission units include opacity and process weight. Visual surveys and/or a semiannual Method 9 source test have been required to monitor compliance with the opacity limit. The Department may request a Method 5 test at any time to monitor compliance with the process weight rule.

S10 Lumber Drying Kilns

The sawed lumber is placed in steam heated kilns and is dried before being planed. The kilns vary in size and emit VOCs through the building roof vents. The average process rate listed in the initial permit application (July 12, 1995) was 186,456 MMbdft/yr.

The applicable requirements associated with this group of emission units include opacity and process weight. Visual surveys and/or a semiannual Method 9 source test has been required to monitor compliance with opacity. The Department may request a Method 5 test at any time to monitor compliance with the process weight rule.

Sawmill Material Handling Cyclones

The following emission units are considered material handling cyclones. Periodic monitoring to monitor compliance with opacity for these sources includes visual surveys and/or a semiannual Method 9 source tests. The particulate emissions from these cyclones are all less than 25 tpy per emissions unit while the majority of the cyclones are under 5 tpy. Therefore, no particulate testing has been required to demonstrate compliance with the emissions limit at this time. However, the Department may require testing if it is determined as necessary.

Description
S12 Planer #3 Cyclone
S13 Planer #4 Cyclone
S14 Planer Shavings Bin Cyclone
S15 Planer Chip Bin Cyclone
S16 Sawmill Chip Bin Cyclone

F01 Vehicle Activity

These fugitive emissions result from driving vehicles on both paved and unpaved roads/areas. Plum Creek has been required to perform visual surveys and/or a semiannual Method 9 source tests to monitor compliance with opacity rules.

F04 Hog Boiler Fuel Handling & Storage

The PM_{10} emissions (23 tpy) result from storing hog fuel on an outside storage pile at the facility. Hog fuel is trucked to the pile and added to the pile either from live bottom trucks. The hog fuel is removed from the pile in an enclosed bunker.

The applicable requirements associated with this group of emission units include opacity and process weight. Plum Creek has been required to perform visual surveys and/or a semiannual Method 9 source test to monitor compliance with opacity. The Department may request a Method 5 test at any time to monitor compliance with the process weight rule.

C. Categorically Insignificant Sources/Activities

Plum Creek did not identify any insignificant emitting units/activities under the Operating Permit renewal application. As part of the initial Operating Permit application (July 12, 1995), Plum Creek identified several emission units as insignificant in their permit application. However, what was identified in the application as insignificant and what the Department identified as insignificant differed as a result of a March 31, 1998, rule change. The appropriate changes were made to the list of insignificant activities and are listed in the table below.

Insignificant Activities and Emissions Unit	
Emissions Unit	**Reason for Determination**
F02 Rail Activity; F03 Landfill Activity; P01 Log Debarker; P02 Bucking Saws; P03 Bark Hog; P09 Wet Fuel Silo; P10 Dry Fuel Silo; P11 Emergency Fuel Pile; P12 Woodwaste Chipper; P15 Plywood Building; S01 Log Debarker; S03 Bark Hog (wet); S09 Sawmill Bldg. Saws; S11 Planer Building, Saws; S17 Sawmill Sawdust Bin Cyclone;	These sources emit particulate at potential levels less than 5 tpy and are subject to generally applicable requirements only.
H01 Gasoline Fueling Tanks; H02 Diesel Fueling Tanks; H03 Propane Fueling Tanks; H06 Machine Shop - Parts Washer;	These sources emit VOCs and some HAPs at potential levels less than 500 lbs/yr and are subject to generally applicable requirements only.
M21 MDF Ammonia Treatment Stacks and M22 MDF Building Fugitives	These sources emit ammonia which is not a regulated pollutant:

H02 Diesel Fueling Tanks

There are three diesel tanks sized at 500; 18,000; and 31,700 gallons. The fugitive VOC emissions (including HAPs) result from filling tanks, breathing losses and vehicle fueling losses.

M21 MDF Ammonia Treatment Stacks and M22 MDF Building Fugitives

Ammonia is impregnated into the MDF to react with any available formaldehyde. The unit that impregnates the ammonia into the MDF is vented through four stacks into the atmosphere. The maximum rated design capacity is 57 ton/hr of MDF. There are no controls installed on these stacks.

The only applicable requirement for ammonia emissions other than those that may be required under SARA Title III and 40 CFR 68 include opacity. Ammonia emissions are very unlikely to exceed the opacity limit, therefore, a Method 9 test will only be required upon request.

SECTION III. PERMIT CONDITIONS

A. Emission Limits and Standards

Updates throughout Operating Permit #OP2667-03 were made as a result of the projects made to comply with 40 CFR 63 Subpart DDDD. Furthermore, some emitting units are no longer at the facility and were therefore removed from the permit, including the boilers previously identified as emitting units B02 and B04, and the Wood Grain Ink and PMA Glycol Ether Solvent related emissions, previously identified as emitting units H04 and H05, respectively.

B. Monitoring Requirements

ARM 17.8.1212(1) requires that all monitoring and analysis procedures or test methods required under applicable requirements are contained in operating permits. In addition, when the applicable requirement does not require periodic testing or monitoring, periodic monitoring must be prescribed that is sufficient to yield reliable data from the relevant time period that is representative of the source's compliance with the permit.

The requirements for testing, monitoring, recordkeeping, reporting, and compliance certification sufficient to assure compliance do not require the permit to impose the same level of rigor for all emission units. Furthermore, they do not require extensive testing or monitoring to assure compliance with the applicable requirements for emission units that do not have significant potential to violate emission limitations or other requirements under normal operating conditions. When compliance with the underlying applicable requirement for an insignificant emissions unit is not threatened by lack of regular monitoring and when periodic testing or monitoring is not otherwise required by the applicable requirement, the status quo **(i.e., no monitoring)** will meet the requirements of ARM 17.8.1212(1). Therefore, the permit does not include monitoring for insignificant emission units.

The permit includes periodic monitoring or recordkeeping for each applicable requirement. The information obtained from the monitoring and recordkeeping will be used by the permittee to periodically certify compliance with the emission limits and standards. However, the Department may request additional testing to determine compliance with the emission limits and standards.

C. Test Methods and Procedures

The operating permit may not require testing for all sources if routine monitoring is used to determine compliance, but the Department has the authority to require testing if deemed necessary to determine compliance with an emission limit or standard. In addition, the permittee may elect to voluntarily conduct compliance testing to confirm its compliance status.

D. Recordkeeping Requirements

The permittee is required to keep all records listed in the operating permit as a permanent business record for at least 5 years following the date of the generation of the record.

E. Reporting Requirements

Reporting requirements are included in the permit for each emissions unit and Section V of the operating permit "General Conditions" explains the reporting requirements. However, the permittee is required to submit semi-annual and annual monitoring reports to the Department and to annually certify compliance with the applicable requirements contained in the permit. The reports must include a list of all emission limit and monitoring deviations, the reason for any deviation, and the corrective action taken as a result of any deviation.

F. Public Notice

In accordance with ARM 17.8.1232, a public notice was published in *The Daily Inter Lake* newspaper on or before April 8, 2011. The Department provided a 30-day public comment period on the draft operating permit from April 8, 2011, to May 9, 2011. ARM 17.8.1232 requires the Department to keep a record of both comments and issues raised during the public participation process. The comments and issues received by May 9, 2011, will be summarized, along with the Department's responses, in the following table. All comments received during the public comment period will be promptly forwarded to Plum Creek so they may have an opportunity to respond to these comments as well.

Summary of Public Comments

Person/Group Commenting	Comment	Department Response
Plum Creek	Page 1 Last Paragraph – "Two Coen and two Energex sander dust burners" should be changed to "3 Coen sander dust burners" since we replaced the Energexes with a Coen several years ago under a de minimis change.	The Department has made the requested change.
Plum Creek	Page 2 – M18 Board cooler vents are actually part of M16 forming and finishing with no control. M19, 20, and 21 can be changed to 18, 19, and 20 respectively. M14 Fire Dump Cyclones are listed as IEUs in the back of the permit and should probably be taken out of the table.	The Department has made the requested change.
Plum Creek	Page 10 B17 – I'm not quite sure what you mean by "the operational status including the fuel types and rates burned in the boiler during this time". All maintenance activities on the multiclones require the boiler to be shut down. In any case, it is physically impossible to run the boiler without the multiclones in place and operating.	The Department acknowledges that if the Riley-Union Stoker boiler cannot be operated without the multiclones in place, a log recording any circumvention of the multiclones would likely never occur. The Department would entertain modifying this condition in future permitting actions.
Plum Creek	Page 16 D4a and D7 – There is no cloth chute on the raw material stacker. The chute is metal.	The word "cloth" has been removed from these permit conditions.
Plum Creek	Page 22 and 23 Section G – M14 Fire Dump Cyclone is listed as an IEU in the back of the permit and should be removed from this section. M17 Board Trim Cyclone has been removed from service and is no longer there.	M14 Fire Dump Cyclone is now only listed in the list of IEU. References to M17 Board Trim Cyclone have been removed from the permit.
Plum Creek	Pages 25 & 27 Section H – It may be more accurate to list the press vents without the number of them since the six old ones have been removed and replaced by one knockout box. The press vent is still active and is still conveyed to the biofilter however.	References to the number of press vents has been removed from these permit conditions.
Plum Creek	Pages 28 through 32 Sections I and J – The board cooler fan vents and the forming and finishing are both the same source. These 2 sections can be combined.	The Department has made the requested change.
Plum Creek	Page 33 K.8 – The testing for this first sentence of this paragraph was completed in 2009. It may be more appropriate to delete the sentence going forward.	The Department has made the requested change.

Person/Group Commenting	Comment	Department Response
Plum Creek	Page 36 Table M.2 – The Line 2 North and South sander baghouses vent to the same stack. The two 2.14 lb/hr emission limits can be combined to 4.28 to clear up any confusion on stack testing.	A note has been added beneath the table describing the combined stack and emission limits.
Plum Creek	Page 53 and 54 V.4 and V.5 – Quite a bit of asphalt paving has been installed in the log yard over the past years to help reduce dust emissions. The major haul road is entirely paved between the truck unloading area and the sawmill and plywood infeed decks. The statement requiring applying chemical dust suppressant is no longer needed. There should still be a requirement for watering roads to wash dust off of the pavement during dry periods.	The Department has modified these conditions to require chemical dust suppressant on unpaved major roads only.
Plum Creek	Page 25 Section H Line 1 Dryer emissions – I would like to propose a pound per hour limit on formaldehyde emissions rather than performing testing on the several inlets and outlets to the biofilter in order to calculate a 90% DRE control for PCWP MACT compliance. As we discussed earlier in your recent tour, we have 7 ducts that enter the biofilter and 2 stacks that discharge from it. Testing all of these ducts proves quite the challenge every 2 years. Having to test just the 2 discharge stacks from the biofilter would greatly simplify the process as well as reduce potential sampling and lab errors, be more safe, and reduce sampling costs. The Flakeboard MDF plant in Eugene, Oregon has a similar pound per hour permit requirement based on a previously tested inlet loading rate. I would like to propose taking the average of the last 2 compliance test inlet results, multiply by 10% (90% DRE) and have a pound per hour formaldehyde limit. This limit would be approximately 5.06 pounds per hour formaldehyde emitted from the Line 1 biofilter. (Average of 49.61 & 51.57 times 10%) The final report for the 2011 testing will be submitted soon, so we can calculate a firm number after submission.	The Department would consider alternate compliance demonstrations for the PCWP MACT requirements in future discussions. At this time, the permit condition does not require any modification to address the PCWP MACT compliance demonstration.

Person/Group Commenting	Comment	Department Response
Plum Creek	Page 32 Section K Line 2 Dryer emissions – I would like to propose a pound per hour limit on formaldehyde emissions rather than performing testing on the several inlets and outlets to the biofilter in order to calculate a 90% DRE control for PCWP MACT compliance. As we discussed earlier in your recent tour, we have 3 ducts that enter the biofilter and 3 stacks that discharge from it. Testing all of these ducts proves quite the challenge every 2 years. Having to test just the 3 discharge stacks from the biofilter would greatly simplify the process as well as reduce potential sampling and lab errors, be more safe, and reduce sampling costs. The Flakeboard MDF plant in Eugene, Oregon has a similar pound per hour permit requirement based on a previously tested inlet loading rate. I would like to propose taking the average of the last 2 compliance test inlet results, multiply by 10% (90% DRE) and have a pound per hour formaldehyde limit. This limit would be approximately X pounds per hour formaldehyde emitted from the Line 2 biofilter. (Average of 32.35 & X times 10%) Due to a unknown chemical causing interference at the lab for the stack tests, Plum Creek had to retest last week. Results should be available in 2 weeks. The final report for the 2011 testing will be submitted soon, so we can calculate a firm number after submission by filling in the "X" with real data.	The Department would consider alternate compliance demonstrations for the PCWP MACT requirements in future discussions. At this time, the permit condition does not require any modification to address the PCWP MACT compliance demonstration.

G. Draft Permit Comments

Summary of Permittee Comments

Permit Reference	Permittee Comment	Department Response

Summary of EPA Comments

Permit Reference	EPA Comment	Department Response

SECTION IV. NON-APPLICABLE REQUIREMENT ANALYSIS

Pursuant to ARM 17.8.1221, under the initial Title V permit action, Plum Creek may request a permit shield for all non-applicable regulatory requirements and regulatory orders identified in the tables in Section 8 of the permit application. The initial Plum Creek permit application identified a permit shield request for applicable requirements for both the facility and for certain emission units. These requirements are contained in the permit in Section IV- Non-applicable Requirements.

Requirements Not Included in Section IV. Non-applicable Requirements of the Operating Permit

Applicable Requirement	Reason for Not Including
40 CFR 50 National Primary and Secondary Ambient Air Quality Standards	These rules have been excluded from Title V as an applicable requirement. However, these rules can be used to impose specific requirements on a major source.
40 CFR 62 Approval and Promulgation of State Plans for Designated Facilities and Pollutants	Because this rule contains requirements for regulatory authorities and not major sources, this rule can be used to impose specific requirements on a major source.
Sub-Chapter 3 Emission Standards	
ARM 17.8.324(1)&(3) Hydrocarbon Emissions -- Petroleum Products	This facility has gasoline storage tanks in excess of 250 gallons.
ARM 17.8.326 Prohibited Materials for Wood or Coal Residential Stoves	This rule may not be applicable to the source at this time, however, it may become applicable during the life of the permit.
Sub-Chapter 5 Air Quality Permit Application, Operation, and Open Burning Fees	
ARM 17.8.501 Definitions	These rules consist of regulatory definition and do not have specific requirements associated with them.
ARM 16.8.1904 Additional Air Quality Operation Fees Required to Fund Specific Activities of the Department Directed at a Particular Geographic Area	Repealed
ARM 17.8.510 Annual Review	These rules do not have specific requirements for major sources because they are requirements for EPA or state and local authorities and are never shielded because these rules can be used as authority to impose specific requirements on a major source.
ARM 17.8.514 Air Quality Open Burning ARM 17.8.515 Air Quality Open Burning Fees for Conditional Emergency, Christmas Tree Waste, and Commercial Film Production Open Burning Permits	The following regulations may not be applicable to the source at this time, however, these regulations may become applicable during the life of the permit.
Sub-Chapter 6 Open Burning	
ARM 17.8.611 Emergency Open Burning Permits ARM 17.8.612 Conditional Air Quality Open Burning Permits	The following regulations may not be applicable to the source at this time, however, these regulations may become applicable during the life of the permit.

Applicable Requirement	Reason for Not Including
40 CFR 60, Subparts D, Da, Db, and Dc	The Department does not provide a facility wide shield from rules for a source which is within the source category to which the rule potentially applies.
40 CFR 60, 40 CFR 61, and 40 CFR 82	The Department does not provide a shield from entire Parts of rules.
ARM 17.8.316 and ARM 17.8.320	The Department does not provide a facility wide shield from rules for a source which is potentially within the source category to which the rules apply.
40 CFR 60, Subpart E	

SECTION V. FUTURE PERMIT CONSIDERATIONS

A. MACT Standards

Plum Creek is subject to the Maximum Achievable Control Technology (MACT) standards under 40 CFR 63, Subpart DDDD - National Emission Standards for Hazardous Air Pollutants from Plywood and Composite Wood Products manufacturing, as applicable. Because the rule requires various parts of the plant to conform, and contains various compliance methods and demonstrations, this rule was placed in the facility wide conditions and shall apply as applicable to each emitting unit.

Plum Creek is subject to the MACT standards under 40 CFR 63, Subpart DDDDD, National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers and Process Heaters, as applicable. EPA has vacated the 2004 Boiler MACT rules, and has promulgated rules applicable to this facility. Revised definitions of Solid Waste, and interpretation of applicability of these definitions to the various fuels used in the boilers at Plum Creek will define which rules apply.

B. NESHAP Standards

The Department is not aware of any NESHAP standards currently being promulgated which may be applicable to this facility.

C. NSPS Standards

The Department is not aware of any future NSPS requirement that may be promulgated that would affect this facility.

D. Risk Management Plan

Plum Creek stores anhydrous ammonia in greater quantities than the minimum threshold quantity allowed by 40 CFR 68.115 or 40 CFR 68.130. Therefore, Plum Creek must comply with all Risk Management Plan Requirements as required.

E. CAM Applicability

An emitting unit located at a Title V facility that meets the following criteria listed in ARM 17.8.1503 is subject to Subchapter 15 and must develop a CAM Plan for that unit:

- The emitting unit is subject to an emission limitation or standard for the applicable regulated air pollutant (unless the limitation or standard that is exempt under ARM 17.8.1503(2));
- The emitting unit uses a control device to achieve compliance with such limit; and
- The emitting unit has potential pre-control device emission of the applicable regulated air pollutant that is greater than major source thresholds.

Plum Creek has a CAM plan in place for the ESP associated with the Riley Union Stoker Boiler, the wet ESP associated with the Line 1-MDF Fiber Dryers, and the wet venturi scrubbers associated with the Line 2-MDF Fiber Dryers. No changes as a result of the Biofilter projects were required, as the biofilters are not intended to control particulate matter.

F. PSD and Title V Greenhouse Gas Tailoring Rule

On May 7, 2010, EPA published the "light duty vehicle rule" (Docket # EPA-HQ-OAR- 2009-0472, 75 FR 25324) controlling greenhouse gas (GHG) emissions from mobile sources, whereby GHG became a pollutant subject to regulation under the Federal and Montana Clean Air Act(s). On June 3, 2010, EPA promulgated the GHG "Tailoring Rule" (Docket # EPA-HQ-OAR-2009-0517, 75 FR 31514) which modified 40 CFR Parts 51, 52, 70, and 71 to specify which facilities are subject to GHG permitting requirements and when such facilities become subject to regulation for GHG under the PSD and Title V programs.

Under the Tailoring Rule, any PSD action (either a new major stationary source or a major modification at a major stationary source) taken for a pollutant or pollutants other than GHG that would become final on or after January 2, 2011 would be subject to PSD permitting requirements for GHG if the GHG increases associated with that action were at or above 75,000 TPY of carbon dioxide equivalent (CO_2e) and greater than 0 TPY on a mass basis. Similarly, if such action were taken, any resulting requirements would be subject to inclusion in the Title V Operating Permit. Facilities which hold Title V permits due to criteria pollutant emissions over 100 TPY would need to incorporate any GHG applicable requirements into their operating permits for any Title V action that would have a final decision occurring on or after January 2, 2011.

Starting on July 1, 2011, PSD permitting requirements would be triggered for modifications that were determined to be major under PSD based on GHG emissions alone, even if no other pollutant triggered a major modification. In addition, sources that are not considered PSD major sources based on criteria pollutant emissions would become subject to PSD review if their facility-wide potential emissions equaled or exceeded 100,000 TPY of CO_2e and 100 or 250 TPY of GHG on a mass basis depending on their listed status in ARM 17.8.801(22) and they undertook a permitting action with increases of 75,000 TPY or more of CO_2e and greater than 0 TPY of GHG on a mass basis. With respect to Title V, sources not currently holding a Title V permit that have potential facility-wide emissions equal to or exceeding 100,000 TPY of CO_2e and 100 TPY of GHG on a mass basis would be required to obtain a Title V Operating Permit.

Plum Creek's potential emissions exceed the GHG major source threshold of 100,000 TPY of CO_{2e} for both Title V and PSD under the Tailoring Rule. Therefore, Plum Creek may be subject to GHG permitting requirements in the future.